What is Claimed is:

[c1] A computerized simulation system for simulating an integrated circuit which comprises:

a computer system comprising an operating environment for computer applications;

a simulator module comprising API functions to construct, simulate and get results from a circuit and function calls for engaging the computer system;

a user program which executes on the computer system and allows a user to define circuit inputs and circuit outputs;

a circuit code module linked to the simulator module comprising an interface to the user program, packaged function calls for the circuit which is simulated and an interface to the user program

.

[c2] The system of claim 1 wherein the code module is compiled as dynamically loadable libraries and is linked to the simulator module through the dynamically loadable libraries.

[c3] The system of claim 1 wherein the code module is compiled as a static binary object.

[c4] The system of claim 1 wherein a load description is provided through the user program by a static load model.

[c5] The system of claim 1 wherein a load description is provided through the user program by a dynamic callback function.

[c6] The system of claim 1 wherein the packaged function calls comprise a description of circuit elements and commands to run the simulation using the simulator's API.

[c7] The system of claim 6 wherein the packaged function calls are compiled into libraries.

[c8] The system of claim 7 wherein the code module also comprises a dynamically

loadable library containing instantiations of API simulator calls.

[c9] The system of claim 1 wherein each circuit type is modeled as a "function" whose internals are described using the simulator's API.

[c10] A method of using a circuit simulator to model a circuit, comprising the steps of:

providing a record of calls made to a circuit simulator during construction and setup of circuits;

packaging the recorded calls together into a circuit code module and adding an interface which can be called by a user program;

linking the circuit code module to the circuit simulator such that the user program can define inputs, outputs and loads for the circuit; and

inputting through the user program the input, output and load of the circuit which is to be modeled.

[c11] The method of claim 10 wherein the circuit simulator has an API interface and the code module has API calls implemented within the module.

[c12] The method of claim 11 also comprising the step of compiling the recorded calls and the code module as a library.

[c13] The method of claim 10 also comprising the step of providing a call-back function prototype to determine the load of the circuit.

[c14] The method of claim 11 wherein each circuit type is modeled as a function whose internals are described using the simulator's API.

[c15] The method of claim 11 also comprising the step of writing detailed source files for each circuit in a high level programming language using the API calls from the circuit simulator.

[c16] A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for using a simulator to model an IC, the method steps comprising:

providing a record of calls made to a circuit simulator during construction and setup of circuits;

packaging the recorded calls together into a circuit code module and adding an interface which can be called by a user program;
linking the circuit code module to the circuit simulator such that the user program can define inputs, outputs and loads for the circuit; and
inputting through the user program the input, output and load of the circuit which is to be modeled.

[c17] The program storage device of claim 16 wherein the circuit simulator has an API interface and the code module has API calls implemented within the module.

[c18] The program storage device of claim 17 wherein the method steps also comprise compiling the stored calls and the code module as a library module.

[c19] The program storage device of claim 16 wherein the method steps also comprise the step of providing a call-back function prototype to determine the load of the circuit.

[c20] The program storage device of claim 17 wherein each circuit type is modeled as a function whose internals are described using the simulator's API.